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Harry F Smith Esq Ohlandt Greeley Ruggiero & Perle L L P One Landmark Square			EXAMINER	
			EHICHIOYA, FRED I	
9th Floor Stamford, CT	06901-2682		ART UNIT	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)				
Office Action Summary	09/698,894	CODEN ET AL.				
Office Action Summary	Examiner	Art Unit				
The MAILING DATE of this account of the	Fred I. Ehichioya	2172				
The MAILING DATE of this communication appears on the cover sheet with the correspondence address Period for Reply						
A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.  - Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).  - Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).  Status						
1) Responsive to communication(s) filed on <u>03 M</u>	<u>larch 2003</u> .					
2a) ☐ This action is <b>FINAL</b> . 2b) ☑ This	s action is non-final.					
3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under <i>Ex parte Quayle</i> , 1935 C.D. 11, 453 O.G. 213.  Disposition of Claims						
4) Claim(s) 1 - 33 is/are pending in the application.						
4a) Of the above claim(s) is/are withdrawn from consideration.						
5) Claim(s) is/are allowed.						
6)⊠ Claim(s) <u>1 - 33</u> is/are rejected.						
7) Claim(s) is/are objected to.						
8) Claim(s) are subject to restriction and/or	election requirement.					
Application Papers	·					
9)☐ The specification is objected to by the Examiner.						
10)☐ The drawing(s) filed on is/are: a)☐ accept	ed or b)⊡ objected to by the Exan	niner.				
Applicant may not request that any objection to the	drawing(s) be held in abeyance. Se	e 37 CFR 1.85(a).				
11) The proposed drawing correction filed on	is: a)□ approved b)□ disapprov	ed by the Examiner.				
If approved, corrected drawings are required in reply to this Office action.						
12)☐ The oath or declaration is objected to by the Examiner.						
Priority under 35 U.S.C. §§ 119 and 120						
13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).						
a) ☐ All b) ☐ Some * c) ☐ None of:						
1. Certified copies of the priority documents have been received.						
2. Certified copies of the priority documents have been received in Application No						
<ul> <li>3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).</li> <li>* See the attached detailed Office action for a list of the certified copies not received.</li> </ul>						
14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).						
a) ☐ The translation of the foreign language provisional application has been received.  15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.						
Attachment(s)						
1) Notice of References Cited (PTO-892) 2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449) Paper No(s)	5) 🔲 Notice of Informal Pa	(PTO-413) Paper No(s) atent Application (PTO-152)				

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## **DETAILED ACTION**

- 1. The application has been examined. Claims 1 33 are pending in this office action.
- 2. Response to communications filed on March 03, 2003 for claims 1 33 in this office action.

## Claim Rejections - 35 USC § 103

- 3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
  - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.
- 4. Claims 1, 2, 4, 5, 7, 9, 24, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,500,920 issued to Julian M. Kupiec (hereinafter "Kupiec") in view U.S. Patent 6,272,457 issued to Terry Edward Ford et al (hereinafter "Ford").

Regarding claim 1, Kupiec teaches a method for providing collateral information for inclusion with an information stream, comprising steps of:

examining (see Kupiec column 14, lines 15 - 20) the information stream to recognize a presence of events that occur in the information stream (see Ford column 2, lines 34 - 36).

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automatically generating database queries (see Kupiec column 34, line 29) from recognized events (see Ford column 2, lines 29 – 33).

analyzing database query results so as to rank and select database query results to be inserted into the information stream as collateral information (see Kupiec column 2, lines 26 – 27 and column 12, lines 1 - 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec with the teaching of Ford wherein the system automatically generate the digital library from the audio/video data. This library could be examined, searched, desired data extracted and appended to an information stream. The motivation is that the interactive tools allow the user to review all speech entries and correct as required.

Regarding claim 2, Kupiec teaches the step of analyzing comprises a step of ranking the database query results based on a plurality of criteria (see column 12, lines 21-22).

Regarding claim 4, Kupiec teaches the database queries are automatically generated (see column 34, line 29) based on information corresponding to a list that identifies topics in text that is automatically extracted from the information stream (see column 2, lines 45 - 52), where the topics correspond to predetermined topic taxonomies (see column 12, lines 34 - 40).

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Regarding claim 5, Kupiec the step of examining comprises a step of automatically extracting text from the information stream (see column 2, lines 45 - 52).

Regarding claim 7, Kupiec teaches the step of automatically extracting text from the information stream (see column 2, lines 45 - 52) comprises a step of operating a voice recognition system (see Ford column 5, lines 8 - 9)

Regarding claim 9, Kupiec teaches the step of automatically extracting text from the information stream comprises a step of operating a character recognition system (see column 24, lines 32 – 35).

Regarding claim 24, Kupiec teaches a computer-implemented method for generating collateral information from an audio/video stream comprising steps of:

examining (see Kupiec column 14, lines 15 – 20) the audio/video stream to recognize a presence of events that occur in the audio/video stream (see Ford column 2, lines 34 –36).

generating database queries (see Kupiec column 34, line 29) from recognized events (see Ford column 2, lines 29 – 33), and

analyzing database query results so as to rank and select database query results to be presented as the collateral information (see Kupiec column 2, lines 26 – 27 and column 12, lines 1 - 6).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec with the teaching of Ford wherein the system automatically generate the digital library from the audio/video data. This library could be examined, searched, desired data extracted and appended to an information stream. The motivation is that the interactive tools allow the user to review all speech entries and correct as required.

Regarding claim 25, Kupiec teaches wherein further comprising a step of inserting the collateral information into the audio/video stream in real time or substantially real time (see column 21, lines 23 – 26).

5. Claims 12, 13, 14, 15, 16, 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of U.S. Patent 5,835,667 issued to Howard D. Wactlar et al (hereinafter "Wactlar").

Regarding claim 12, Kupiec teaches a method for providing collateral information for multiplexing with an information stream, comprising steps of:

Kupiec teaches automatically generating queries from the information elements (column 34, line 29) for searching at least one database (see column4, lines 58).

Kupiec does not explicitly teach converting the information stream into text.

Analyzing the text to identify information elements,

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extracting data from database search results that is relevant to the information stream; and multiplexing the data into the information stream for presentation at a destination of the information stream.

However, Wactlar teaches converting the information stream into text (see column 17, lines 43 – 45);

analyzing the text to identify information elements (see column 9, lines 42 – 43); extracting data from database search results that is relevant to the information stream (see column 15, lines 2 – 6); and

multiplexing the data into the information stream for presentation at a destination of the information stream (see column 15, lines 7 - 26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec with teaching of Wactlar wherein tentative entry is created in the database. The motivation being that it facilitates the storing of characterizing information if the user then corrects or changes the text using voice commands.

Regarding claim 13, Wactlar the step of extracting comprises a step of ranking the extracted information based on a plurality of criteria, and where the step of multiplexing uses the ranked data (see column 15, lines 7 - 26).

Regarding claim 14, Kupiec teaches the step of extracting comprises a step of ranking extracted document information based on a score derived from a free text

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search of a document database using the text, on a number of named entities extracted from the text that are found in the documents (see column 2, lines 45 – 52 and column 4, lines 66 – 67)

Kupiec does not explicitly teach a taxonomy path score, where the taxonomy path score represents an amount of relatedness between a taxonomy-related information element identified in the text and a predetermined taxonomy tree.

However Wactlar teaches a taxonomy path score, where the taxonomy path score represents an amount of relatedness between a taxonomy-related information element identified in the text and a predetermined taxonomy tree (see column 13, lines 13 – 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teaching of Kupiec with the teaching of Wactlar wherein steps of ranking extracted document information is based on a score and aging factor. Consequently, an event is less likely to be considered as time passes.

Regarding claim 15, Wactlar teaches the queries are generated based on information elements that correspond to a list of information elements identifying topics in the text being analyzed, where the topics correspond to predetermined topic taxonomies (see column 6, line 67 and column 7, lines 1 - 10).

Regarding claim 16, Wactlar teaches the step of analyzing the text comprises steps of segmenting the text into sentences and a step of operating on the sentences to

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identify topics that correspond to predetermined topic taxonomies, and wherein the step of automatically generating queries operates on identified topics (see column 6, line 67 and column 7, lines 1 - 10).

Regarding claim 17, Wactlar teaches the step of analyzing the text comprises steps of at least segmenting the text into sentences (see column 6, line 67 and column 7, lines 1 – 10), identifying names of entities within the text, and a step of operating on the sentences to identify topics that correspond to predetermined topic taxonomies (see column 17, lines 48 - 51), and wherein the step of automatically generating queries operates on identified topics and ranks the database search results based at least on numbers of named entities found and on an amount of relatedness between a taxonomy-related information element identified in the text and a predetermined taxonomy tree (see column 13, lines 13 – 15).

6. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of U.S. Patent 5,970,460 issued to Eric Bunce et al (hereinafter "Bunce").

Regarding claim 18, Kupiec teaches a system for providing collateral information for inclusion with an information stream, said system operating in real time or substantially real time and comprising:

automatically generating database queries from recognized events (see column 34, lines 29).

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a subsystem, having an input coupled to an output of said database (see column 2, lines 24 - 30), for analyzing database query results so as to rank and select database query results to be inserted into the information stream as collateral information (see column 2, lines 26 - 27 and column 12, lines 1 - 6).

a database for receiving said database queries (see column 2, lines 24 - 30)

Kupiec does not explicitly teach a subsystem for examining the information stream to recognize a presence of events that occur in the information stream;

a subsystem, having an input coupled to an output of said examination subsystem, for automatically generating database queries from recognized events.

However, Bunce teaches a subsystem for examining the information stream to recognize a presence of events that occur in the information stream (see column 1, lines 63 - 57 and column 2, lines 1 - 3);

a subsystem, having an input coupled to an output of said examination subsystem (see column 1, lines 63 - 67 and column 2, lines 1 - 3).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec with teaching of Bunce wherein the a system for providing collateral information for inclusion with an information stream is attained. The motivation is that the process also produces speech/audio event database, which can be used as an index into diction event database for commands correcting previously misrecognized diction event.

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7. Claims 3, 6, 8, 10, 11, 26, 27, 31, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Ford and further in view of Wactlar.

Regarding claim 3, Kupiec teaches the plurality of criteria comprise a score derived from a free text search of the database

(see column 4, lines 66 - 67) using text that is automatically extracted from the information stream, on a number of named entities appearing in the text and in the database query results (see column 2, lines 45 - 52).

Kupiec or Ford do not explicitly teach and on a taxonomy path score, where the taxonomy path score represents an amount of relatedness between a taxonomy-related information element found in the text and a predetermined taxonomy tree.

However, Wactlar teaches and on a taxonomy path score, where the taxonomy path score represents an amount of relatedness between a taxonomy-related information element found in the text and a predetermined taxonomy tree (see column 13, lines 13 – 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec and Ford with the teaching of Wactlar wherein the object are classified. The motivation is that segmenting video by appearance of a particular object or a combination is a powerful tool to detect a particular class of object.

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Regarding claim 6, Kupiec teaches wherein the step of automatically generating database queries operates on identified topics (see column 34, line 29)

Kupiec or Ford do not explicitly teach segmenting the text into sentences; and operating on the sentences to identify topics that correspond to predetermined topic taxonomies

However, Wactlar teaches segmenting the text into sentences; and operating on the sentences to identify topics that correspond to predetermined topic taxonomies (see column 3, lines 31 - 38. column 6, line 67 and column 7, lines 1 - 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec and Ford with the teaching of Wactlar wherein the system automatically generate the digital library from the audio/video data. This library could be examined, searched, desired data extracted and appended to an information stream. The motivation is that the interactive tools allow the user to review all speech entries and correct as required.

Regarding claim 8, Kupiec teaches the step of automatically extracting text from the information stream (see column 2, lines 45 - 52)

Kupiec or Ford does not explicitly teach comprises a step of extracting closed caption text.

However, Wactlar teaches comprises a step of extracting closed caption text (see column 7, lines 58 – 62)

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching or Kupiec and Ford with the teaching of Wactlar wherein to induct the segmenter goes through the process of extracting text before returning errors on the closed-caption data. The motivation being that since close-caption data contains punctuation mark, it makes it possible to introduce sentence break in the usual way.

Regarding claim 10, Wactlar teaches the step of automatically extracting text from the information stream comprises a step of also generating text that is descriptive of a number of human faces that are present in an image conveyed by the information stream (see FIGs. A-1 and A-2).

Regarding claim 11, Wactlar teaches the step of examining the information stream further comprises steps of segmenting the text into sentences (see column 7, lines 26 - 27) and a step of operating on the sentences to identify topics that correspond to predetermined topic taxonomies and the presence of names of entities (see column 6, line 67 and column 7, lines 1 - 10), and further comprising steps of assembling a list comprised of an identified topic having a start time and an end time, as well as any named entities that occur between the start time and the end time, assembling a query object comprised of named entities that occur between the start time and the end time of the identified topic (see column 19, lines 28 - 30), searching at least one database to identify a first set of stored documents that correspond to the

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topic, identifying a subset of the first set of documents that contain the named entities, identifying a second set of documents that correspond to words found in the text (see column 7, lines 28 - 33); scoring the returned documents based on a plurality of criteria and ranking the documents based on their scores (see page 10, lines 19 – 22).

Regarding claim 26, Kupiec and Ford does not explicitly teach the step of examining includes a step of generating a speech transcript from at least the audio portion of the audio/video stream, and wherein recognized events comprise speech topics

Wattle teaches the step of examining includes a step of generating a speech transcript from at least the audio portion of the audio/visual stream, and wherein recognized events comprise speech topics (see column 6, lines 41 - 48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching or Kupiec and Ford with the teaching of Wactlar wherein the audio data is subjected to the function of speech and language interpretation. The motivation being that the digital video library is made available to users that desire it.

Regarding claim 27, Wactlar teaches the audio/video stream originates as a television broadcast signal (see column 1, lines 25 – 33).

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Regarding claim 31, Kupiec teaches the database queries are automatically generated (see column 34, lines 29).

Kupiec and Ford does not explicitly teach based on information corresponding to identified topics extracted from the audio/video stream, where the topics correspond to predetermined topic taxonomies.

However, Wactlar teaches based on information corresponding to identified topics extracted from the audio/video stream, where the topics correspond to predetermined topic taxonomies (see column 6, lines 41 – 48 and column 13, lines 13 – 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching or Kupiec and Ford with the teaching of Wactlar wherein database queries are automatically generated. The motivation is that the process also produces speech/audio event database, which can be used as an index into diction event database for commands correcting previously misrecognized diction event.

Regarding claim 32, Wactlar the step of examining includes steps of generating a speech transcript comprised of words from at least the audio portion of the audio/video stream (see column 2, lines 44 – 53); segmenting the words into sentences; and operating on the sentences to identify topics that correspond to predetermined topic

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taxonomies, wherein the step of generating database queries operates on identified topics (see column 6, line 67; column 7, lines 1 – 10 and column 19, lines 28 – 30).

8. Claims 19 - 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Bunce and further in view of Wactlar.

Regarding claim 19, Kupiec teaches the analyzing subsystem employs ranking criteria comprised of a score derived from a free text search of the database using text that is automatically extracted from the information stream, on a number of named entities appearing in the text and in the database query results (see column 2, lines 45 – 52).

Kupiec or Bunce does not explicitly teach and on a taxonomy path score, where the taxonomy path score represents an amount of relatedness between a taxonomy-related information element found in the text and a predetermined taxonomy tree, and wherein the query generation subsystem generates queries based on information corresponding to a list that identifies topics in the text that is automatically extracted from the information stream, where the topics correspond to elements of the taxonomy tree.

However, Wactlar teaches and on a taxonomy path score, where the taxonomy path score represents an amount of relatedness between a taxonomy-related information element found in the text and a predetermined taxonomy tree, and wherein the query generation subsystem generates gueries based on information corresponding

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to a list that identifies topics in the text that is automatically extracted from the information stream, where the topics correspond to elements of the taxonomy tree (see column 13, lines 13 - 15).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec and Bunce with the teaching of Wactlar wherein the system automatically generate the digital library from the audio/video data. This library could be examined, searched, desired data extracted and appended to an information stream. The motivation is that the interactive tools allow the user to review all speech entries and correct as required.

Regarding claim 20, Kupiec said examining subsystem comprises at least one unit for automatically extracting text from the information stream (see column 2, lines 45 -52).

Kupiec or Bunce does not explicitly teach a unit for segmenting the text into sentences and at least one unit for operating on the sentences to identify topics that correspond to predetermined topic taxonomies, wherein said query generation subsystem automatically generates database queries based at least in part on identified topics.

However, Wactlar teaches a unit for segmenting the text into sentences and at least one unit for operating on the sentences to identify topics that correspond to predetermined topic taxonomies, wherein said query generation subsystem

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automatically generates database queries based at least in part on identified topics (see column 6, line 67; column 7, lines 1 - 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec and Bunce with the teaching of Wactlar wherein the system automatically generate the digital library from the audio/video data. This library could be examined, searched, desired data extracted and appended to an information stream. The motivation is that the interactive tools allow the user to review all speech entries and correct as required.

Regarding claim 21, Kupiec or Bunce does not explicitly teach said text extracting unit comprises at least one of a voice recognition system, a system for extracting closed caption text, and a character recognition system.

However, Wactlar teaches said text extracting unit comprises at least one of a voice recognition system, a system for extracting closed caption text, and a character recognition system (see column 6, lines 39 – 40 and column 7, lines 58 – 62).

Regarding claim 22, Kupiec or Bunce does not explicitly teach said examining subsystem comprises a unit for generating text that is descriptive of a number of human faces that are present in an image conveyed by the information stream.

However, Wactlar teaches said examining subsystem comprises a unit for generating text that is descriptive of a number of human faces that are present in an image conveyed by the information stream (see FIGs. A-1 and A-2).

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Regarding claim 23, Kupiec or Bunce does not explicitly teach comprising a unit for operating on the sentences to identify the presence of names of entities, and further comprising a unit for assembling a list comprised of an identified topic having a start time and an end time, as well as any named entities that occur between the start time and the end time, and where the query generation subsystem assembles a query object comprised of named entities that occur between the start time and the end time of the identified topic for searching said database to identify a first set of stored documents that correspond to the topic, a subset of the first set of documents that contain the named entities, a second set of documents that correspond to words found in the text; and where said analyzing subsystem scores the returned documents based on a plurality of criteria and ranks the documents based on their scores.

However, Wactlar teaches comprising a unit for operating on the sentences to identify the presence of names of entities, and further comprising a unit for assembling a list comprised of an identified topic having a start time and an end time, as well as any named entities that occur between the start time and the end time (see column 19, lines 28 - 30), and where the query generation subsystem assembles a query object comprised of named entities that occur between the start time and the end time of the identified topic for searching said database to identify a first set of stored documents that correspond to the topic, a subset of the first set of documents that contain the named entities (see column 7, lines 28 - 33), a second set of documents that correspond to words found in the text; and where said analyzing subsystem scores the

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returned documents based on a plurality of criteria and ranks the documents based on their scores (see column 9, lines 42 - 55).

 Claims 28, 29, 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec in view of Ford and further in view of U.S. Patent: 5,786,814 issued Thomas P. Moran (hereinafter "Moran").

Regarding claim 28, Kupiec or Ford does not explicitly teach the audio/video stream originates at a meeting, and further comprising a step of presenting the collateral information to meeting participants in real time or substantially real time

Moran teaches the audio/video stream originates at a meeting, and further comprising a step of presenting the collateral information to meeting participants in real time or substantially real time (see column 5, lines 25 - 60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine teaching of Kupiec and Ford with the teaching of Moran wherein indices are created into meeting recording. The motivation is that this provides an intuitive way for people to gain direct access to portions of the recorded session.

Regarding claim 29, Moran teaches the step of presenting comprises a step of inserting the collateral information into the audio/video stream, and displaying the audio/video stream to the meeting participants (see column 29, line 67 and column 30, lines 1 - 9).

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Regarding claim 30, Moran a step of archiving at least the collateral information (see column 30, lines 10 - 18).

10. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kupiec.

Regarding claim 33, Kupiec teaches a computer readable media having recorded thereon a program for providing collateral information for inclusion with an information stream (see column 21, lines 23 - 26), the program comprising instructions for examining the information stream to recognize a presence of events that occur in the information stream (see column 14 lines 15 - 20), for automatically generating database queries from recognized events (see column 34, line 29); and for analyzing database query results so as to rank and select database query results to be inserted into the information stream as collateral information (see column 2, lines 26 - 27 and column 12, lines 1 - 6).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify teaching of Kupiec wherein the system automatically generate the digital library from the audio/video data. This library could be examined, searched, desired data extracted and appended to an information stream. The motivation is that the interactive tools allow the user to review all speech entries and correct as required and append the result to the stream of information.

## Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fred I. Ehichioya whose telephone number is 703-305-8039. The examiner can normally be reached on M - F 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Y. Vu can be reached on 703-305-4393. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-303-3900.

Fred Ehichioya May 17, 2003

SUPERMISORY PATENT EXAMINER TECHNICLOGY CENTER 2100